Volume 19 Contents

January

Editorial 1
Soluble β-Galactoside Binding Lectins: Physicochemical and Functional Properties. N Ali 2
Biochemical Education in Colombia and Peru. Report on IUB Workshops held in Cali, Colombia, 3–6 July 1990 and Lima, Peru, 9–13 July 1990 7
Some Thoughts on the Role of External Examiners. P N Campbell 13
Student Commitment to Self-evaluation. B B Torres 15
Writing Exercises and the Biochemical Literature in the First Undergraduate Biochemistry Course. C L Bering 17
Strategies in the Citrate Cycle: Segmental Coupling, Unidirectional Driving and Stoichiometric Incorporation of Reducing Equivalents. V M C Madeira 19
Conversion of Oxidative Energy to Reductive Power in the Citrate Cycle. G Banfalvi 24
Biochemical Education in Gulbarga, Karnataka State, India. V H Mulimani 26
Noticeboard 28
Cyclic Structures of Monosaccharides. The Fischer and Haworth Projection Formulae; The α- and β-Anomers. H Rahi 29
A Student's Guide to Practical Write-ups. J R L Walker 31
Experimental Section
Demonstration of Chromatographic Techniques Using Minicolumns. D R Miller, C E Hepfer and S L Turchi 33
Hemolysis Studies on Erythrocytes of Different Shapes: a Laboratory Class Experiment. C Saldanha, M Nunes and J Martins e Silva 34
Mitochondria from Rat Liver: Method for Rapid Preparation and Study. C R Heisler 35
Videotape Review 38
Book Reviews 39
Microcomputer Software Review 46
Lexicon 47
Monitor 48

April

Editorial 49
Structure and Function of Fc Receptors. K Hajela 50
Introduction and Implementation of Problem-Solving Lectures for Instruction in Medical Biochemistry at Osaka University Medical School in Japan. T Sugiyama, F Isohashi, T Higashi, H Kagamiyama, K Tagawa and N Taniguchi 58
Biochemical Education in Bulgaria. Report on a Workshop held at the University of Sofia, Bulgaria, 2–4 October, 1990 64
The 'Licence in Biochemistry' at the University of Liège (Belgium). J Aghion 70
Ribozyme: A Novel Enzyme. R R Athota and T M Radhakrishnan 72
What is Protein Engineering? Z Galzie 74
Tips—How to Succeed as a Biochemistry Student. D Norwell 75
Noticeboard 76
Experimental Section
A Low Cost Oxygen Meter. E T H Marques Jr, F A C Spencer Netto and J L Lima Filho 77
A Practical Investigation and Data Handling Exercise Involving *in vitro* Translation of Natural and Synthetic Messenger RNAs. S J Higgins and B D Hames 78
Easily Built Simplified DNA Models. P Del Castillo and J C Stockert 82
Immobilization of Invertase Using a Recycling Enzyme Reactor System. F Schneider and R Marczak 83
Into the 90s—Using the Polymerase Chain Reaction in a Lipid Practical. J T Powell and S A Wiseman 85
A Microcomputer Method for Modelling an Oxido-reduction Titration Curve. F Rodriguez and M Prats 88
Adenosine Deaminase Deficiency in Erythrocytes. E Szabados and R I Christopherson 90

Videotape Review 94
Microcomputer Software Review 94
Book Reviews 95
Lexicon 103
Monitor 104

July

Editorial 105
Glycoprotein Biochemistry—Some Clinical Aspects of Interest to Biochemistry Students. C A Smith, J J Gaffney, L H Seal, G A Nicholas and A J Freemont 106
A Mechanism for Accelerating the Use of Non-traditional Objectives and Methods in Biochemistry Courses. A H Mehler 117
Educating—For a Qualification or a Career? E M Evans 121
A Structured Course Incorporating Self Study: Students Work Harder and Love It. A A Livne 124
Demonstration of Teaching Aids. E J Wood 127
What should be Included in a Textbook of Biochemistry for Medical Students? (Poster presentation). M Ledvina 128
Biochemical Education in Thailand: Past, Present and Future. J Svasti and R Surarit 129
Evolution of Osmolyte Systems. G Banfalvi 136
Noticeboard 140
Experimental Section
A New Computerized Approach for Teaching the Nature of Membrane Potentials. J Vázquez 140
The Windogradsky Column: A Simple and Inexpensive Approach to Teach Environmental Biochemistry. R R Grau, A S Limansky, J C Diaz Ricci and D de Mendoza 143
A Computer Display of the Free Energy Changes of ATP Hydrolysis. K-I Nakamura, T Furukohri and K Shikama 147
Size Exclusion Chromatography and Size Exclusion HPLC of Proteins. S Tayyab, S Qamar and M Islam 149
Disulphide Groups in Proteins. W L Baker and A Panow 152
Enzyme Kinetics Educational Software for a Laboratory Class. Y Aso and Y Eguchi 154
Letter to the Editor. R W Hanson 155
Reply to comments by R W Hanson. V M C Madeira 155
Videotape Review 156
Book Reviews 157
Lexicon 163
Monitor 164

October

Editorial 165
Heat Shock Proteins: Molecular Chaperones. N Ali and N Banu 166
Biochemical Education in Central America. Report on an IUB Workshop held in San Jose, Costa Rica, 4–8 March 1991 173
To Improve Biochemical Education Around the World. F Vella 178
Use of General Principles in Teaching Biochemistry. R H Fernández and A V Tomey 182
Learning from Failures. M Saffran 184
Making Examinations Work For Us. A H Mehler 185
Multiple Choice Items: How to Gain the Most Out of Them. P Tamir 188
Reshaping the Preclinical Medical Curriculum: A Modest Proposal. B G Charlton 192
Case Study on Diabetes Mellitus. R W Brosemer 193
Using Glucose as a Focus for Understanding Carbohydrate Structure and Metabolism. O Chude 195
Order of a Reaction for Hyperbolic Curves. O P Chauhan and S K Singla 197
Oral History of Biochemistry in the UK. H F Bradford 197
Problems Page 199
Shirts and Shish-kebabs; John Mercer and Mercerization. P Speakman 200

The Prague Institute of Advanced Studies (PIAS). J Škoda 203
Phase Transitions in Phospholipid Bilayers: Lateral Phase Separations Play Vital Roles in Biomembranes. M O Eze 204
Noticeboard 208
Experimental Section
Quantification of Coenzyme (FAD) Using the Apoenzyme of a Flavin Enzyme, D-Aminoacid Oxidase. F Schneider 209
An Experiment in Membrane Enzyme Purification with Triton X-114: Avocado Pear Polyphenoloxidase. M A Medina, R García de Veas, A García-Hermoso and I Núñez de Castro 210
Heteroionic Exchange in Bone Powder: A Laboratory Experiment. F F Gavarron 211
Practical Study of Acetyl CoA Turnover I. Model, Method and Results. G Durliat and F Simonnet 212
Practical Study of Acetyl CoA Turnover II. Computer Operation and Developments. G Durliat and F Simonnet 216
Letters to the Editor. A K Babu and S K Singla 219
Book Reviews 220
Lexicon 223
Monitor 224
Title Section, Volume Contents, Subject and Author Indexes to Volume 19, 1991 i